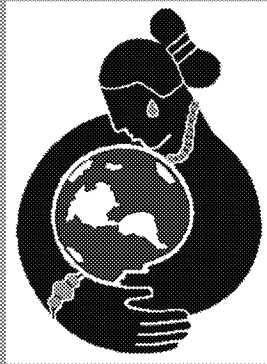
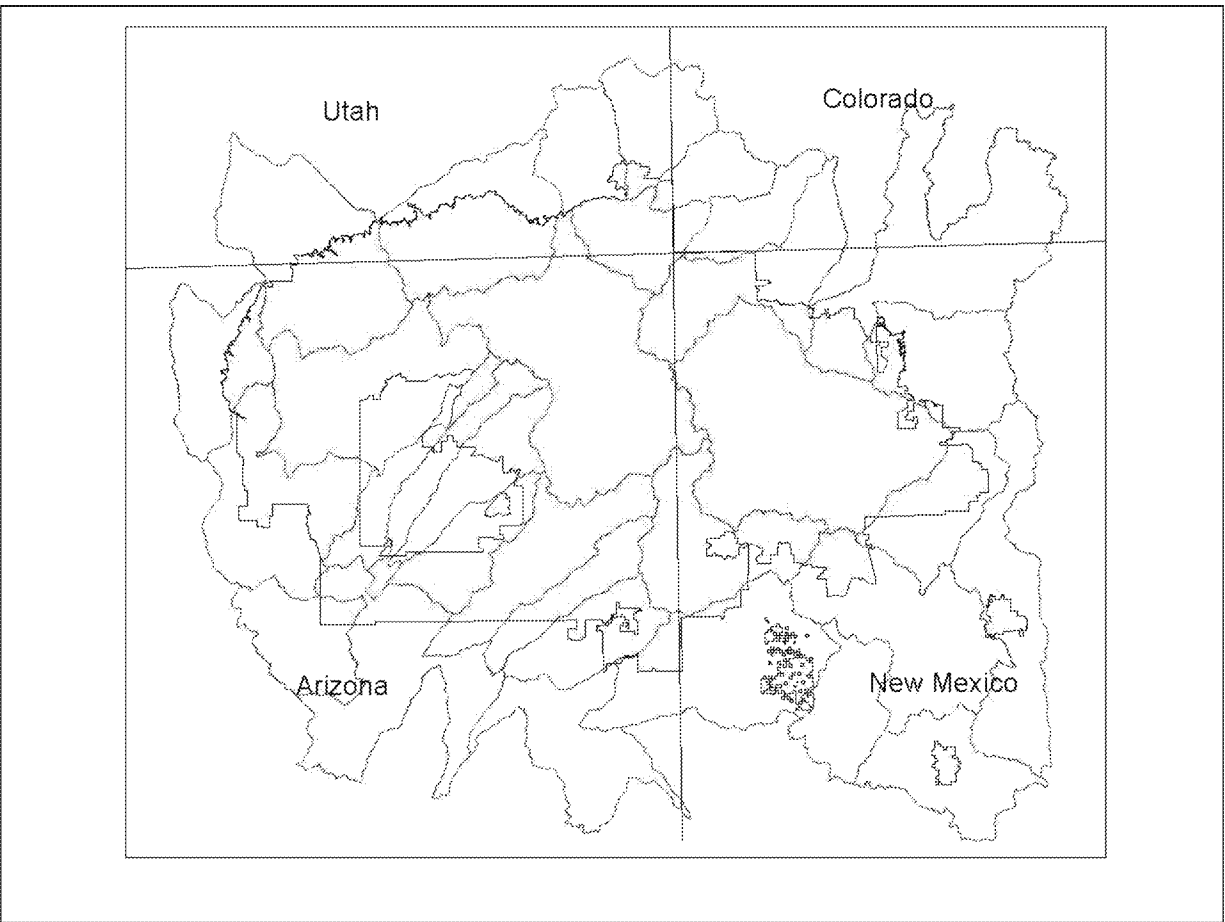


**Navajo Nation Environmental
Protection Agency**



**Proposed Amendments to 2007
Navajo Nation Surface Water
Quality Standards**



Approximately 18 million acres or 27.5 thousand square miles

Watershed Name	2 digit code	8-digit HUC
Chinle Wash	01	14080204
Lower San Juan - Four Corners	02	14080201
Montezuma Creek	03	14080203
McElmo Creek	04	14080202
Arroyo Chico	05	13020205
Chaco Wash	06	14080106
Mancos River	07	14080107
Upper San Juan River	08	14080101
Blanco Canyon	09	14080103
Middle San Juan River	10	14080105
Rio Puerco	11	13020204
Rio San Jose	12	13020207
Rio Salado	13	13020209
Zuni River	14	15020004
Upper Puerco River	15	15020006
Lower Puerco River	16	15020007
Leroux Wash	17	15020009
Cottonwood Wash	18	15020011
Middle Little Colorado River	19	15020008
Jeddito Wash	20	15020014
Polacca Wash	21	15020013
Canyon Diablo	22	15020015
Corn-Oraibi Wash	23	15020012
Dinnebito Wash	24	15020017
Lower Little Colorado River	25	15020016
Moenkopi Wash	26	15020018
Lower Colorado - Marble Canyon	27	15010001
Lower Lake Powell	28	14070006
Lower San Juan River	29	14080205

Smallest Mancos at 64 square miles
Largest Chaco at 4500 square miles
Over 120 name surface waters with designated uses



San Juan Basin



Rio Grande Basin - Blue Water



Little Colorado River Basin



Lower and Upper Colorado River Basins



From Mountain Lakes (Whiskey)



And streams (Asaayi Creek)



Ephemeral



desert



Washes



washes

Proposed Amendments to 2007
Navajo Nation
Surface Water Quality
Standards (NNSWQS)

NNSWQS Document

Consists of:

Part I - General Provisions

Part II - Surface Water Quality Standards

NNSWQS Document (continued)

Part I - General Provisions:

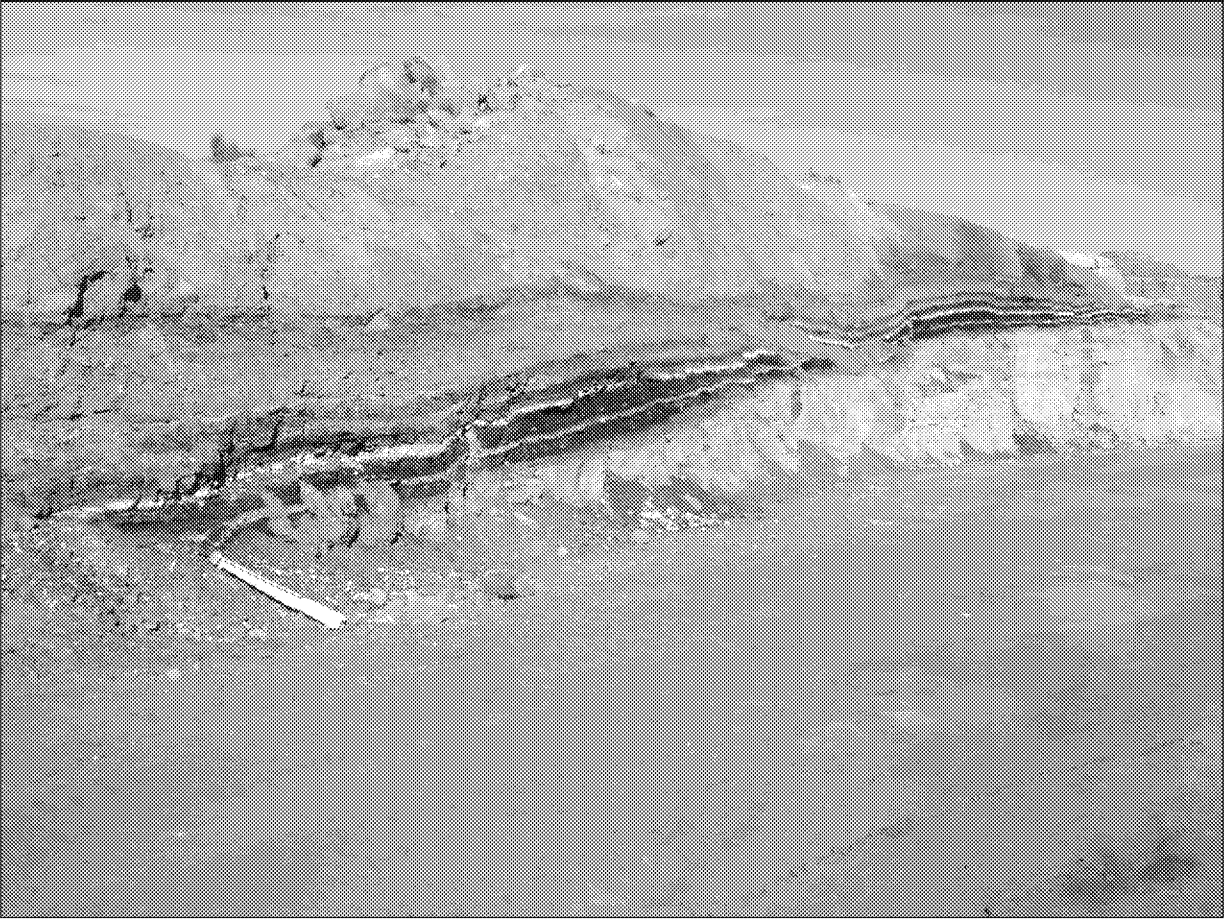
- 101 Title
- 102 Authority
- 103 Purpose
- 104 Definitions
- 105 Severability

NNSWQS Document (continued)

Part II - Surface Water Quality Standards:

- 201 Antidegradation Policy
- 202 Antidegradation Implementation Procedures
- 203 Narrative Surface Water Quality Standards
- 204 Implementation Plan
- 205 Narrative Nutrient Standard Implementation Plan
- 206 Designated Use Classification System for NNSW
- 207 Numeric Surface Water Quality Standards
- 208 Sample Collection and Analysis
- 209 Exceptional Waters of the Navajo Nation
- 210 Variances
- 211 Wastewater Mixing Zones
- 212 Site Specific Standards
- 213 Natural Background
- 214 Biological Standards (Reserved)













Section 101 - Title

Statement of title:

“These regulations may be cited as the Navajo Nation
Surface Water Quality Standards 2015 (NNSWQS 2015).”

As opposed to Ground Water Quality Standards which may be proposed in the future.

Section 102 - Authority

A. Navajo Nation Authorization:

1. Navajo Nation Clean Water Act Section 104(b), and
2. Navajo Nation Clean Water Act Section 201.

B. Federal Authorization:

1. Federal Clean Water Act Section 303, and
2. Federal Clean Water Act Section 518.

C. No amendments to this section.

B.1. Section 518 is Tribal Authorization.

Section 103 - Purpose

- A. Provides the intent of standards and states that standards apply to all “Waters of the Navajo Nation” (as defined in Navajo Nation Clean Water Act and in Section 104):

General purpose: to protect, maintain, and improve water quality for water supply, plant and animal life, domestic, cultural, agricultural, recreational, and industrial uses.

- B. This purpose is consistent with the goals of the Navajo Nation and federal Clean Water Acts.
- C. No amendments to this section.

Cultural emphasis.

Section 104 - Definitions

A. Sets definitions for all technical, legislative, and jurisdictional terms used in the Water Quality Standards.

B. Key changes to definitions

“Assimilative Capacity” means the difference between the baseline water quality concentration of a pollutant and the most stringent applicable water quality criterion for that pollutant.

B. Ambiguity or misunderstandings or different interpretations.

Section 104 - Definitions

“Critical Flow Condition” means the lowest flow over seven consecutive days that has a probability of occurring once in 10 years (7 Q 10).

“Chronic Standard” means a standard that applies to the geometric mean of the analytical results of the last four samples taken at least 24 hours apart~~arithmetic mean of samples collected during four consecutive days.~~

B. Ambiguity or misunderstandings or different interpretations.

Section 105 - Severability

- A. States that if, for any reason, any provision or application of the Navajo Nation Water Quality Standards is found to be invalid, that the remaining provisions and applications are to remain unaffected.

This concludes Part I - General Provisions

Section 201 - Antidegradation Policy

A. Provides tiers of water quality protection.

Tier 1: The level of water quality necessary to protect existing uses shall be maintained and protected. No degradation of existing water quality is permitted in a surface water where the existing water quality does not meet the applicable water quality standard.

Part II - Surface Water Quality Standards – existing instream uses changed to existing designated uses

Section 201 - Antidegradation Policy

Tier 2: Where existing water quality in a surface water is better than the applicable water quality standard, the existing water quality shall be maintained and protected. The Director may allow limited degradation of existing water quality in the surface water.

But not violate the WQS.

Section 201 - Antidegradation Policy

Tier 3: Existing water quality shall be maintained and protected in a surface water that is classified as a Exceptional Water of the Navajo Nation under NNSWQS 2015 Section 209 .

The Director may allow limited degradation of an Exceptional Water of the Navajo Nation .

But not violate the WQS.

Section 202 - Antidegradation Implementation Procedures

A. Process by which antidegradation decisions are made.

This section applies to a regulated discharge that may degrade the existing water quality of a surface water. "Regulated discharge" means a point source discharge regulated under a National Pollutant Discharge Elimination System (NPDES) permit, any discharge regulated by an individual, nationwide or regional §404 permit, and any discharge authorized by a federal permit or license that is subject to Navajo Nation water quality certification under §401 of the US Clean Water Act

Section 202 - Antidegradation Implementation Procedures

Tier 1 antidegradation protection: The level of water quality necessary to meet applicable water quality standards shall be maintained and protected in a ephemeral, perennial, or intermittent surface water.

A regulated discharge shall not cause a violation of the surface water quality standard for a surface water listed as impaired under the US Clean Water Act §303(d) list and/or listed as effluent limited under the Navajo Nation Clean Water Act §205.

Section 202 - Antidegradation Implementation Procedures

Tier 2 antidegradation protection applies to a perennial water with existing water quality that is better than applicable water quality standards. Existing water quality water shall be maintained and protected

A perennial water water that is not listed as impaired under the US Clean Water Act §303(d) list and/or not listed as effluent limited under the Navajo Nation Clean Water Act §205 for the pollutant that results in a listing is presumed to have Tier 2 antidegradation protection for all pollutants of concern.

Section 202 - Antidegradation Implementation Procedures

Tier 3 antidegradation protection applies only to Exceptional Waters of the Navajo Nation and their tributaries. Existing water quality in an Exceptional Water of the Navajo Nation shall be maintained and protected. A new or expanded regulated discharge directly to an Exceptional Water of the Navajo Nation is prohibited.

Section 203 - Narrative Surface Water Quality Standards

- A. Protects all waters in narrative form from degradation that would adversely affect human health, plant, and animal communities.
- B. Provides for protection of waters that are not yet assigned designated uses and for waters that may not have sufficient numeric criteria.
- C. Provides that all Navajo Nation waters shall be free from toxic pollutants. Aquatic toxicity may be determined by the “National Whole Effluent Toxicity (WET) Implementation Guidance Under the NPDES Program, Draft, U.S. Environmental Protection Agency, Office of Wastewater Management,

Probably the greatest level of protection for Waters of the Navajo Nation is provided by the narrative surface water quality standards.

Added nutrient narrative - implementation plan in 204

Added trash dumping narrative



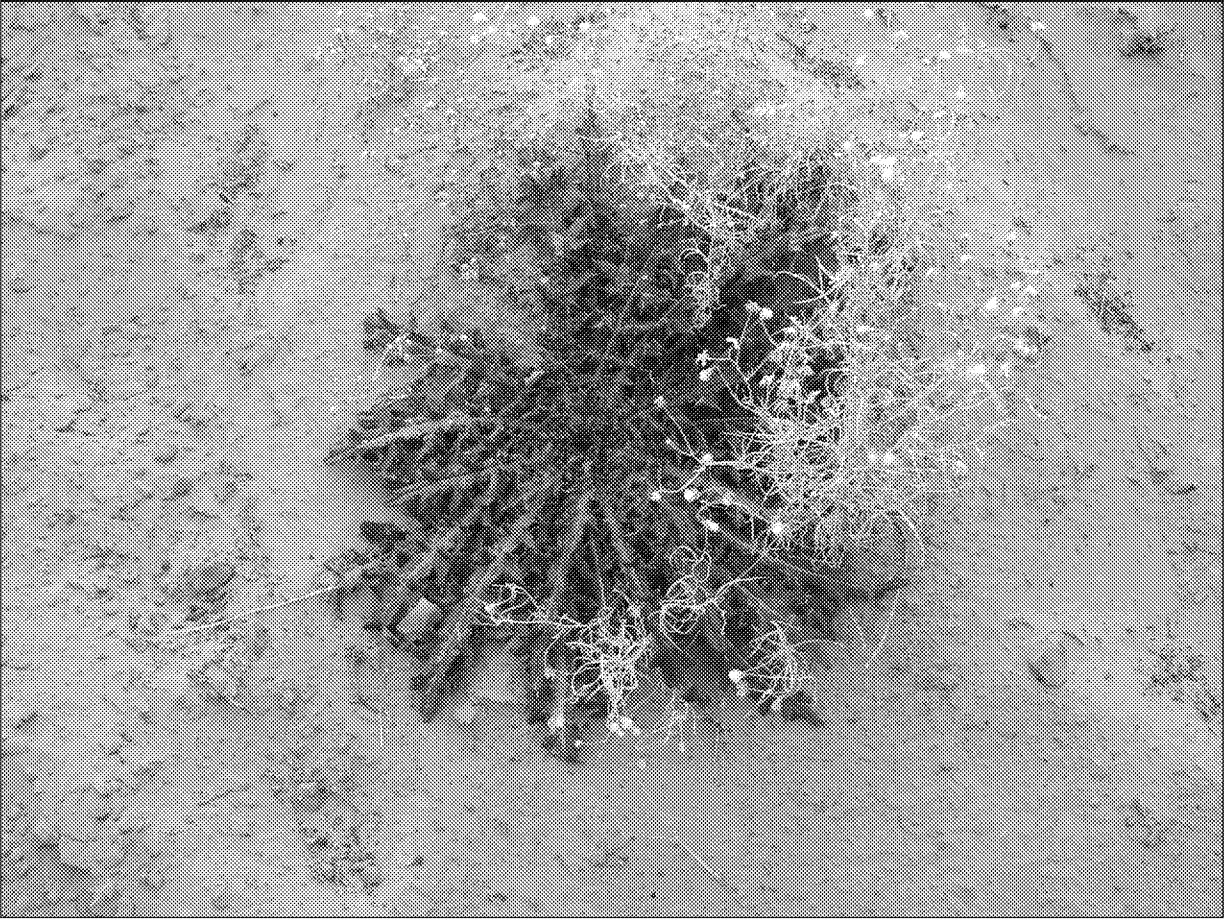




Section 204 - Implementation Plan

- A. Details the Water Quality Standard Program's goals and objectives. Highlights include:
1. Water quality database development,
 2. Determine effectiveness of pollution controls,
 3. Provide technical assistance to wastewater facilities,
 4. Develop and pursue inspection and enforcement programs.
 5. Require that sufficient instream flows be maintained to support designated uses and water quality standards, and
 6. Determine whether designated uses are met. (CWA 303(d) and 305(b) water quality reporting.

Part of Water Quality Standards Process mentioned earlier.



Thistle



Section 205 – Narrative Nutrient Standard Implementation Plan

- A. Sets numeric and narrative nutrient targets for lakes and reservoirs during peak productivity season.
- B. No amendments made to this section.

Algae blooms , fish kills, nuisance aquatic vegetation. Implementation of nutrient narrative in 202



Section 206 - Designated Use Classification System for Navajo Nation Surface Waters

- A. Minimum uses designated for surface waters.
- B. Other uses determined through public input and professional judgment. Past, present and future uses considered
- C. Current Navajo Designated Uses provide protection for:
 - 1. Domestic Water Supply,
 - 2. Fish Consumption,
 - 3. Recreation, Ceremonial, and Cultural:
Primary & Secondary Human Contact,
 - 4. Agricultural Water Supply,
 - 5. Aquatic and Wildlife, and
 - 6. Livestock Watering.

B. Moenkoepe example - Agricultural Water Supply - springs dried up by groundwater withdrawals- industry said use not appropriate.

Change of definitions for LW and AWHbt

Section 206 - Designated Use Classification System (continued)

- D. Existing water quality does not need to be determined before assigning designated uses (40 CFR 131.10(k)).
- F. Adding new water bodies to the Water Quality Standards may be done during each triennial review period.
- G. Designated uses can only be changed if the use cannot be attained.

2. Industry said to do Use Attainability Analysis before designating a use. Not required to.

Section 206 - Designated Use Classification System (continued)

- H. Each designated use has a corresponding numeric water quality standard that provides protection for that designated use.
- I. Numeric standards are different for different designated uses. For example:

One compound, such as the metal Mercury, may have one numeric standard for water used as a domestic water supply and a different one for water that is used for livestock and wildlife watering.
- J. When a water has more than one designated use, the numeric standards applied are the most stringent established for that body of water.

I. Provide Example.

Section 206 - Designated Use Classification System (continued)

K. Known Waters of the Navajo Nation and their designated uses are found in Table 206.1.

The following minimum designated uses apply to a surface water that is not listed in Table 206.1 but that is a tributary to a listed surface water:

The aquatic and wildlife, agricultural water supply, secondary human contact and livestock watering designated uses apply to a tributary that is an ephemeral water.

The aquatic and wildlife, agricultural water supply, secondary human contact, primary human contact, fish consumption and livestock watering designated uses apply to an unlisted tributary that is a perennial or intermittent surface water.

I. Provide Example.

[illegible]

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Section 207 - Numeric Surface Water Quality Standards

A. Navajo Nation derive numeric criteria and also adopte
numeric criteria from:

Surrounding states, other tribes and federal criteria

B.. Numeric Standards protect the designated uses.

C. Level of protection may be higher than that of adjacent
state or tribe for the same designated use.

Condensed tables

Section 207 - Numeric Surface Water Quality Standards (continued)

E. Federal EPA will review numeric standards to ensure that they will provide the level of protection required for each designated use.

F. Numeric Surface Water Quality Standards are found in this section and in Table 207.1.

Mercury and Methylmercury: The following are the water quality standards for mercury and methylmercury in total concentrations which apply only to Waters of the Navajo Nation listed in this section (§ 207 (I)):

A&W(chronic) Mercury 0.001 ug/L Methylmercury
0.00011 ug/L

D. Agricultural Water Supply Standard for molybdenum for New Mexico is 1.0 mg/L while Navajo is 0.01 and adopted from New Mexico Pueblos and Hopi tribe to protect cultural uses associated with agricultural waters.
Adopted criteria for methyl mercury in fish and water. And 0.00011 ug/L mercury in water for Aq&WHbt chronic lowest in the country

F. From: Data in the field. Published scientific reports.

1320000K 1000000K 500000K 0K

Figure 1

$$\text{Chronic Standard} = [e^{(1.273 [\ln(\text{hardness})] - 4.706)}] [1.46203 - [\ln(\text{hardness})]]^{(0.145712)}$$
[illegible]

Section 208 - Sample Collection and Analysis

- A. When the regulated community is required to comply with a numerical water quality standard, the sampling and laboratory techniques they use to gather this information must be of high quality.
- B. Requires the regulated community to use sample collection and analysis methods acceptable to the Navajo Nation EPA Water Quality Program.

When an analytical result is reported as $<X$ or as $=X$, where X is the Method Reporting Limit for the analyte and the Method Reporting Limit is less than or equal to the surface water quality standard, the result will be considered as meeting the water quality standard.

Section 209 – Exceptional Waters of the Navajo Nation

- A. New section. Replaces definition of “Unique Waters”.
- B. Process by which a surface water may be classified as an Exceptional Water of the Navajo Nation (EWNN).

Part II - Surface Water Quality Standards – existing instream uses changed to existing designated uses

Section 210 - Variances

- A. Provides Water Quality Program flexibility.
- B. Does not modify a water quality standard.
- C. Applicant must meet strict requirements:
 - 1. Not technically feasible to achieve compliance within three years; or
 - 2. Cost of treatment would result in substantial and widespread social and economic impact.
 - 3. No Variances for discharges into EWNN.
- D. Not renewable but reissued with adequate justification.
- E. One amendment to this section.

Variances are pollutant specific

Section 211 - Wastewater Mixing Zones

- A. Provides Water Quality Program flexibility.
- B. Area in a surface water body where dilution of wastewater occurs, therefore numeric standard may be exceeded in this dilution or mixing zone.
- C. Applicant must meet strict requirements:
 - 1. Mixing zones are not granted in lieu of control measures to reduce point source discharges but will be granted to complement such measures.
 - 2. Approval is required by Navajo Nation EPA and concurrence by federal EPA.
- D. Amendments were made to this section.



Section 212 –Site Specific Standards

- A. New section.
- B. Process for adopting a site specific water quality standard at a given surface water body.

Part II - Surface Water Quality Standards – existing instream uses changed to existing designated uses

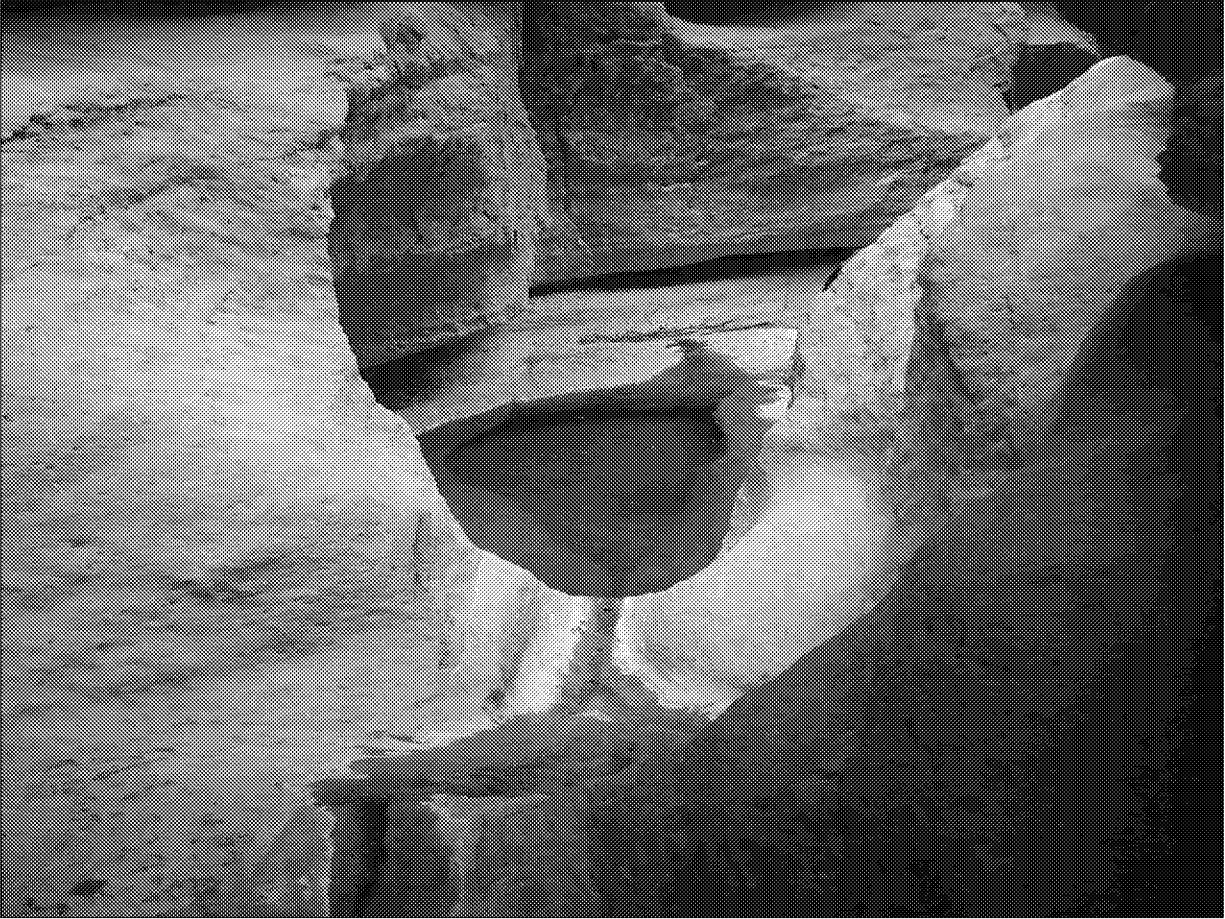
Section 213 –Natural Background

- A. New section.
- B. Statement that natural background may be used when deciding if a water quality standards is violated.

Part II - Surface Water Quality Standards – existing instream uses changed to existing designated uses

Section 214 - Biological Criteria (Reserved)

- A. May be required by federal EPA in the future.
- B. Biological standards are determined by looking at the health of the biological communities (plants, insects, amphibians, fish, and wildlife) present in, or near, Navajo Nation surface water bodies.
- C. When combined with numeric water quality standards, this provides for increased human health and aquatic life protection.
- D. No amendments made to this section.



Thank You



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